

Chlorosis

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What is chlorosis? Chlorosis is a common nutritional disorder of many woody ornamentals in Wisconsin, particularly the southern and eastern parts of the state. The trees most often affected by chlorosis are pin oaks, although white oaks and many other trees and shrubs, such as red maple, white pine and *Rhododendron* spp., are also very susceptible.



Yellowing of foliage characteristic of chlorosis.

What does chlorosis look like?

Symptoms of chlorosis are easy to distinguish from those of other diseases. Affected leaves turn yellow, except for the veins, which remain green. In severe cases, the yellow foliage may turn brown and die. Affected foliage can occur on isolated branches, or over the entire tree.

What causes chlorosis?

Chlorosis occurs because the affected tree is lacking certain micronutrients, in many cases iron. Lack of micronutrients in a tree may reflect a lack of these nutrients in the soil due to poor fertilization. Often, however, there are sufficient micronutrients in the soil, but they cannot be absorbed by the tree's roots. Poor absorption of micronutrients is common in Wisconsin because of the high pH or alkalinity of many state soils.

How do I save a tree or shrub with chlorosis?

Chlorosis is rarely fatal and easily treatable. For treatments to be effective, you must determine the exact cause of the chlorosis. Have the soil around the affected tree tested for micronutrients and for pH prior to applying any treatment. If the soil test indicates a lack of specific micronutrients, fertilize with these micronutrients. For example, chelated iron compounds can be used to increase the amount of iron in soil. If the soil test

indicates a high soil pH, lower the pH by applying sulfur or ammonium sulfate. Contact your county Extension agent for information on soil testing, and for details on a treatment once you have determined the specific cause of your chlorosis problem.

How do I avoid problems with chlorosis in the future? Consider planting trees and shrubs that are less susceptible to chlorosis. If you decide to plant susceptible trees and shrubs, chlorosis is likely to be a recurring problem. Watch your trees closely for the yellowing characteristic of this disorder and apply treatments as appropriate. Remember that treatments should always be based on the results of soil micronutrient and pH tests.

For more information on chlorosis: See UW-Extension Bulletin A2638 or contact your county Extension agent.